THE OPTIONS TRADING BODY OF KNOWLEDGE

THE DEFINITIVE SOURCE FOR INFORMATION ABOUT THE OPTIONS INDUSTRY

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Introduction

Enhancing profits is a goal for every stock investor. The options market is one avenue to achieving this goal, but it is complex; within the market itself, there are many ways to trade. This makes the options market both exciting and potentially risky.

The scope of possible strategies can be overwhelming for an options trader. The basic trades—buying calls or puts for speculation—are only the most obvious uses of options. They can be used in a broad range of expanded strategic applications. Some are very high-risk, and others are very conservative.

One of the most popular strategies is the *covered call*, which involves selling one call against 100 shares of stock owned. A covered call seller (also called a writer) receives a premium when the option is sold, and that premium is profit if the call ends up expiring worthless. The short position can also be closed at any time or held until exercise. In any of these outcomes, the trader continues to earn dividends on the stock and has a lot of control over the outcome. A properly selected covered call can easily create double-digit profits in any of the possible outcomes. This makes the strategy practical for most people.

On the far side of the spectrum is the practice of selling naked options. When traders do this, they receive premium income, but they also risk exercise and potentially large losses. Many variations of naked writes might be used to mitigate the market risk. In between the very conservative and the very high risk are numerous other strategies. Options can also be used to hedge stock positions, reduce risk, and enhance profits in many ways.

This book is designed to provide readers with a comprehensive reference for the entire options market. Most people prefer to focus on the listed options available on individual stocks, and this is the focus of the examples provided in the "Option Strategies" chapters. However, options are also available on futures, indices, and mutual funds, and the options market has expanded beyond its original limited scope and size. In the 1970s, when publicly traded options first became available, only a few traders even knew about options. Today, the entire options market has become mainstream, and a growing number of people are recognizing that options can provide many roles within a market portfolio and can serve a broad range of risks.

The one change in technology that has made the options market so widely accessible has been the Internet. Two developments have significantly affected the way that traders are able to trade and can afford to be in the market at all. First is access itself. With the Internet, anyone can go directly to current option listings and track their holdings or identify opportunities. Only a few short decades ago, before the Internet existed, options traders had to rely on stockbrokers, which meant having to visit or telephone an office, wait for the stockbroker to look up listings, and then decide on whether to make a trade. Any stockbroker who was not physically on the floor of an exchange had a considerable time lag as part of this process, making active trading impossible.

The second major change is cost. In the "old days" when you could only trade through a broker, commission costs were quite high compared to today's cost. With widespread use of online discount brokerage services, options trades cost as little as a few dollars, with the average ranging between seven and ten dollars each way. So a round trip (buy and sell) can be accomplished for less than quarter of one point, which is a huge discount over commission costs of the past.

Do you need a broker? This is the question that every trader has to deal with when thinking about moving to a discount service, where trade execution is offered without advice. Ironically, the answer for options trading is that you not only do not need a broker, but using one means you probably should not be trading options. By definition, any trader who has enough experience or knowledge to actively trade options should be using a discount broker. The concept of asking a broker's advice for an options trade is nonsensical for three reasons. First, stockbrokers are not necessarily skilled within the options market, even if they are licensed to execute options trades. Second, options trading demands on-going tracking of both options and the stocks they refer to. Third, paying a high commission to a full-service brokerage firm erodes profits from options trades, making many strategies marginal or impractical.

This book is designed for the options trader, whether a novice or skilled pro, who understands and appreciates the market issues. They are going to be more likely than average to employ a discount brokerage service, to make their own decisions, and to monitor their investments. Full-commission brokerage is appropriate only for clients who are worried about risk, who are less knowledgeable about markets, and who trust their broker to give them sound advice. This is a large market, although it is not growing. In comparison, the options market is growing and expanding. Not only are options available today on more products than ever before, but the volume of trading has also grown at

incredible speed. In 1973, slightly more than one million contracts were traded. In 2007, more than 944 million traded. In the 34 years between 1973 and 2007, the annual volume declined only seven times. But the recent explosion of the options market has been impressive. For example, between 2006 and 2007, total volume grew by 40 percent; the previous year, growth was 44 percent. The future of this market is going to be even bigger, and a growing number of investors will use options in some form as an integral feature of their portfolio. This alone is a substantial change in the options market.

In the past, options have been viewed by "the crowd" of Wall Street as an oddity, a side-bet, or an entirely separate market, appropriate only for speculators. But as new products and new strategies have been developed, this outlook has evolved. Today, retail and institutional investors use options to (a) insure long portfolio positions, (b) hedge short risks, (c) play short-term market price swings, and (d) enhance profits. Even in the most basic of portfolios, all these applications of options make them valuable management and risk-reduction tools. The most basic speculation in options is an entry strategy for many options traders, but it is becoming less important over time. Today, the options market has grown into a means for taking a lot of risk out of the investment equation.

This book provides a market overview and discussion of risks, in addition to a comprehensive listing of strategies. Most of these strategies are accompanied by tables and illustrations identifying profit and loss zones, as well as breakeven points. The strategy section uses companies for examples. These are based on actual option values for three publicly listed companies; however, their names have been changed due to the ever-evolving share prices of each. All the stock prices and option premium values are based on the closing values of those stocks and options as of December 31, 2007. By using this fixed moment in time, all examples are based on the same data. However, even though stock and option valuation changes constantly no matter when you analyze relative values, the approximate option risks and opportunities remain identical. As long as time to expiration is the same as that in the examples, and proximity between strike price and current market value remains within the same range, the values of options and the likely outcome of strategies will work in the same manner.

This book also provides a very comprehensive explanation of how option premium develops based on various elements of value; calculation of returns from options and stock trading; federal taxation works in the options market; how stocks are picked for options trading; online and print resources; and a very complete glossary of terms that options traders will find valuable.

chapter 1

Market Overview

The realm of options is a highly specialized, intricate, and often-misunderstood market. The reputation of options as high risk is only partially deserved. In fact, you can find option products to suit any investment profile, from very high risk to very conservative. This market has grown tremendously since 1973, when the modern era of options trading officially began. Since that first year when options trading began in the U.S., annual volume has grown from 1.1 million contracts (in 1973) up to over 3 billion (in 2008).[1]

Today, options are more popular than ever and have become portfolio tools used to enhance profits, diversify, and reduce risks. Only a few years ago, a few insiders and speculators used options, and the mainstream investor did not have access to trading. Most stockbrokers were not equipped to help their customers make options trades in a timely manner, placing the individual investor at a great disadvantage. With today's Internet access and widespread discount brokerage services, virtually anyone with an online hook-up can track the markets and trade options.

The History of Options Trading

There really is nothing new about options. They can be traced back at least to the mid-fourth century B.C. Aristotle wrote in 350 B.C. in *Politics* about Thales, a philosopher who anticipated an exceptionally abundant olive harvest in the coming year and put down deposits to tie up all of the local olive presses. When his harvest prediction came true, he was able to rent out the presses at a greatly appreciated rate.[2]

In this example, the deposits created a contract for future use. When that contract gained value, the option owner (Thales) proved to be a shrewd investor. Options enable traders to leverage relatively small amounts of capital to create future profits or, at least, to accept risks in the hope that those options will become profitable later. This all relies on the movement of prices in the underlying security. Thales relied on supply and demand for olive presses, and the same strategic rule applies today. Options are popularly used to estimate future movement in the prices of stocks or indexes. The concept is the same, and only the product is different.

A similar event occurred in seventeenth century Holland with a much different outcome, when interest in tulips sparked a mania. The tulip had become a symbol of wealth and prestige, and the prices of tulip bulb options went off the charts. By 1637, prices had risen in these options to the point that people were investing their life savings to control options in single tulip bulbs. The craze ended suddenly, and many people lost everything overnight. Banks failed, and a selling panic took the high level of prices down into a fast crash. There is a valuable lesson in this "tulipmania" for everyone trading options today. In an orderly market, prices of stocks and options rise and fall logically. The reasoning is sound because tangible supply and demand factors make sense. In a market craze, prices change quickly and irrationally. In the tulipmania example, there was no rational reason for anyone to invest everything in tulip bulb options—other than the fact that everyone else was doing it, and it seemed that they were getting rich in the process.

The difference between Thales and the Dutch was one of common sense. Thales saw an opportunity and invested with a clear vision of how profits would follow. He was correct, and he made a profit. In the tulipmania example, greed blinded people, and the reckless actions brought about the crash. Symptoms included the rapidly growing prices, expansion of the market, and the failure to realize that the prices were simply too high.

For many decades after the Dutch experience, public sentiment about speculation was unfavorable. Of course, there were numerous examples of market

speculation, which never seems to disappear altogether. However, in the U.S., nothing really took place in any form of options trading in the public markets until 1872. That year, a businessman named Russell Sage developed the first modern examples of call and put options. He made money on the venture and bought a seat on the New York Stock Exchange two years later. His career was successful, but was spotted with occasional scandals. In 1869, he was convicted under New York usury laws and was later associated with Jay Gould, an infamous market manipulator. Gould had tried to corner the gold market at one point and later invested in the railroad industry, along with Sage and many others.

The Sage options lacked standardized terms (rules making option features identical in each case), making it difficult to expand the market beyond the initial buyer and seller. Standardized terms in use today include the number of shares of stock each option controls, the day the option will expire, the stock on which an option is being offered, and the stock price pegged to each specific option.

The Sage options started a trend that never ended. These contracts remained largely limited to a few insiders in the exchanges and were traded over the counter (any form of trading when a specific exchange is not involved in the trade). This trading format remained the same, without any reliable trading rules or valuation, until the 1970s.

The Chicago Board of Trade (CBOT) was interested in diversifying the options market as a means for bolstering trading in the larger investment market. CBOT established a new organization in 1973, the Chicago Board Options Exchange (CBOE). On April 26, 1973, CBOE initiated the first options market with guaranteed settlement (ensuring every buyer and seller that the market would promise execution) and standardization of price, expiration, and contract size for all listed call options. The Options Clearing Corporation (OCC) was also created to act as guarantor of all option contracts. (This means that the OCC acts as buyer to each seller and as seller to each buyer, guaranteeing performing on every option contract.) Trading was initially available on 16 listed companies.[3]

By 1977, when put options trading was first allowed, the market had grown to over 39 million contracts traded (in 1973, only 1.1 million traded). Trading began taking place not only through the CBOE system, but on the American, Pacific, and Philadelphia Exchanges as well. Today, volume is higher than ever before and spread among the CBOE as well as the American, Philadelphia, New York, International, and Boston Exchanges. A breakdown of 2007's record 2.86 *billion* contracts traded is provided in Figure 1.1.

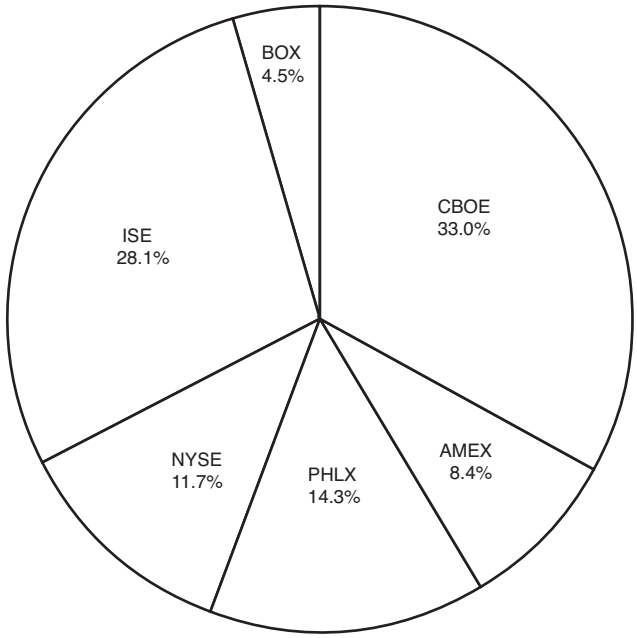

Figure 1.1 Option contract volume by Exchange, 2007

Source: CBOE 2007 Market Statistics

Growth in the markets over 35 years has been impressive. This is summarized in Figure 1.2.

In 1982, a new concept was introduced beyond the use of calls and puts on stocks. Index options were originated by the Kansas City Board of Trade with options on the Value Line stocks. This Value Line Index option was followed in 1983 with CBOE's introduction of the OEX (comprised of 100 large stocks, all with options on the CBOE), which is now known as the S&P 100 Index. The Chicago Mercantile Exchange introduced S&P 500 futures trading, which began a trend in trading of futures indexes as well as options. In 1976, CBOT began trading in Government National Mortgage Association (GNMA, also known as Ginnie Mae) futures, which was the first interest rate futures product. Many more options and futures indexes have since followed. By 1984, after years of futures trading on agricultural commodities, options were first listed on soybeans. This began an expansion of both options and futures markets. Today, you can write *options* on *futures*, which is a form of exponential leverage. A futures option is a derivative on a derivative.

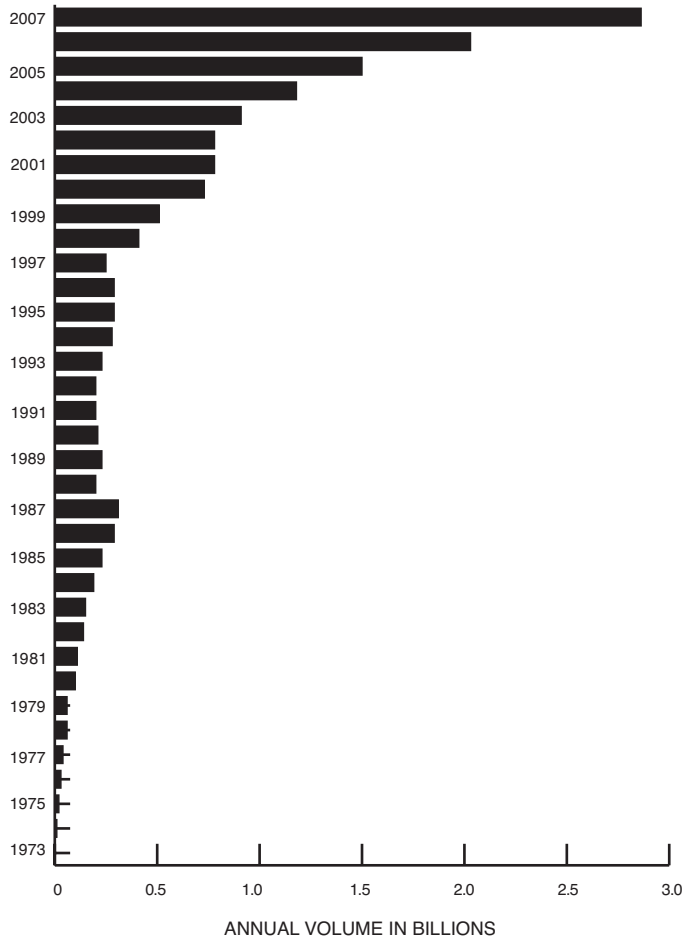

Figure 1.2 Option contract volume by year, 1973–2007

Source: CBOE 2007 Market Statistics

In 1990, the CBOE introduced a new type of options, the long-term equity anticipation securities option, or LEAPS. The LEAPS option is exactly the same as the listed call or put, but its lifespan is much longer. The traditional option lasts only eight months or so at the most before it expires, but the LEAPS option extends out as far as 30 months. This longer-term option makes strategic planning much more interesting and flexible, allowing traders and investors to use the LEAPS option in many ways that are not practical with a shorter-term call or put.

Today's options market looks much different than the market of a few decades ago. It has expanded and continues to expand every month. You can buy and sell options on stocks, futures, indexes, and even exchange-traded funds (ETFs). In the future, additional forms of expansion will broaden the influence of options into many more markets, with the introduction of new and potentially profitable option tools.

Basics of Options—Standardized Terms

Today, all listed options include standardized terms. These are the type of option (call or put), the underlying security on which options are bought or sold, the strike price, and the expiration date.

Calls and Puts

A Call Is the Right to Buy 100 Shares

A *call* is an intangible contract that grants its owner the right, but not the obligation, to buy 100 shares of a specific underlying stock at a fixed strike price per share and on or before a specific expiration date. The owner of the call acquires these rights in exchange for a premium paid for the option. The value of the option rises if the terms become more attractive before expiration, meaning the market price of the stock rises. If the current market value of the call is higher than the fixed strike price, the option value rises; if it remains at or below the fixed strike price, the premium value falls.

The call buyer is not obligated to exercise the option; there are three choices. The option may be allowed to expire worthless, which occurs if the current market value remains below the strike price. The contract can also be closed at a profit and sold on the open exchange. The sale might also occur at a small loss; the options trader may realize that the position is unlikely to become profitable, and taking a partial loss then becomes preferable to letting the contract expire. Finally, the options owner can exercise that option and buy 100 shares at the fixed strike price. For example, if the strike is 50 and current value per share is $56, exercise of the option enables its owner to buy 100 shares at the fixed price of $50 per share, or six dollars per share lower than current market value.

The call seller does not pay a premium, but receives one. When a trader sells an option, or goes short, the trading sequence is reversed from the sequence most people understand. Rather than the well-known *long* position of buy-hold-sell, a *short* position has the sequence sell-hold-buy. When a trader sells a call, this grants the rights under the option contract to someone else: a buyer. The

seller and buyer do not meet face to face because all options trading is done through the Options Clearing Corporation (OCC), which facilitates the market (acting as seller to each buyer and as buyer to each seller). When exercise does occur, the OCC matches the transaction and assigns the shares of stock to an options writer. In the case of a short call, the seller is obligated to sell 100 shares of the underlying stock at the fixed strike price. For example, if the strike is 50 and current market value per share is $56, a seller is obligated to sell shares at the fixed strike of $50 per share, even if that means having to buy the same shares at $56 per share, or for a loss of six dollars ($600 for 100 shares).

A Put Is the Right to Sell 100 Shares

A put is the opposite of a call. This option grants its owner the right, but not the obligation, to *sell* 100 shares of stock at a fixed strike price, on or before a specific expiration date. Just as a call owner hopes the value of the stock will rise, a put owner hopes the value of the stock will fall. The more the price falls, the more valuable the put becomes.

A put buyer might take one of three actions before expiration. The put can be closed at its premium value and a profit or loss taken. The put can also be allowed to expire worthless, which occurs if the underlying stock is at or above the strike price at the time of expiration. Finally, the put can be exercised. This means the owner is allowed to sell 100 shares of the underlying stock at the fixed strike price. For example, if a trader owns 100 shares purchased at $50 per share and also buys a 50 put, exercise will occur at that price. If the stock's value falls to $41 per share before expiration, the put owner can exercise the put and sell 100 shares for $50 per share, even though current market value is far lower. The put protects the stock investor from the decline by offsetting the stock loss in the appreciated value of the put.

A put seller grants the option rights to a buyer. So if a trader sells a put, it means that he might be obligated to accept 100 shares of the underlying stock at the fixed strike. If the strike is 50 and the current market value of the stock falls to $41 per share, the put will be exercised. The put seller will have 100 shares put to them at the fixed price of $50 per share, or nine points above current market value.

The Underlying Security

The underlying security in an option contract is fixed and cannot be changed. Options are traded only on a single security, which may be a stock or an index, future, currency, commodity, or exchange-traded fund (ETF). Many creative expansions and variations of the options market have been developed and

continue to be introduced. Examples in this book focus on options on stock, as the best-understood and most popular form of listed options trading.

Every option refers to the rights on 100 shares of stock. A single option grants rights to those 100 shares, either to buy (call) or sell (put). The option's current premium value is expressed on a per-share basis, however. For example, if an option is currently valued at 4.60, that means it is worth $4.60 per share, or $460.00 (per 100 shares).

Strike Price

The value at which options can be exercised is called the *strike price* (also known as striking price and exercise price). For example, if the strike is 50, it means the option will be exercised at $50 per share if and when exercise does occur. The proximity between strike price and current market value determines the option's value, along with the amount of time remaining until expiration.

When the underlying stock's current value is higher than a call, the call is in the money (ITM). When the price is lower than the strike, the call is out of the money (OTM). When it is exactly equal to the strike, the call is at the money (ATM).

For puts, this is opposite. When the stock's price is higher than the put strike, it is out of the money (OTM); when the stock price is lower than the fixed strike, that put is in the money (ITM). These distinctions are very important; a strategy for buying or selling options relies on stock moving in a desired direction to create profits.

Expiration

Every option is scheduled to expire in the future. The farther away the expiration date, the higher the option's value. With options, traders coordinate time with proximity of price. The closer the strike to current market value of the underlying stock, the more the price of the option reacts to price changes in the underlying stock; the closer the expiration date, the more the option's premium value reacts to the stock's price movement.

When a trader opens an option, the time remaining until expiration affects the decision about which specific contract to buy or to sell. Time to expiration affects the value of the option and defines risk. For options sellers, the longer the time until expiration, the greater the risk of exercise. Exposure to this risk is one of the most important factors in comparing option prices. Exercise is most likely to occur on the last trading day, but it can occur at any time during the life of the option. For options buyers, a long time until expiration is positive

because with more time, there is an increased chance of movement in the price of the underlying stock. A desirable change in value (upward for call buyers or downward for put buyers) defines whether options will be profitable or not. But a negative to this expanded time is higher cost. The more a trader pays to buy an option, the more difficult it will be to create future profits.

The Option Premium and Its Components

The *premium*—the cost of the option—is going to vary over time based on three factors: time to expiration, volatility, and intrinsic value.

Time to Expiration

The longer the time until expiration, the higher the "time value" of the option. Time value tends to change very little for exceptionally long-term options. For example, for a LEAPS (long-term equity anticipation securities) option, which may have as much as 30 months to expiration, changes in the underlying stock's price have little or no effect on the time value. As time approaches expiration, however, the rate of decline in time value premium accelerates. At the point of expiration, time value will have declined to zero.

The tendency for time value to accelerate as expiration approaches affects the decision about when to buy or sell an option, especially for those trading short positions (selling options). The majority of long options are not going to become profitable, mainly due to the declining time value. However, short options traders know that time value creates profits. As time value evaporates, the option loses premium value. And because short traders go through the sequences of sell-buy-hold instead of the opposite, reduction in value equals profits. So the short trader sells to open, and then when value has fallen, buys to close at a lower premium level. This is where time value works for the seller.

Volatility

The most elusive and hard to understand part of premium value is due to the level of volatility in the underlying stock. This volatility is an expression of market risk. Stocks with relatively narrow trading ranges (the distance between highest and lowest price levels) are less risky, but they also offer less opportunity for profits in the stock or in options. Stocks with broad trading ranges and rapid changes in price are high-risk but also offer greater profit opportunities. The option premium level is directly affected by this price volatility. The level of

unpredictability in a stock's current and future price level defines an option's premium value.

Some analysts include this volatility effect as part of time value, but this only confuses the analysis of options. Time value by itself is quite predictable and, if it could be isolated, would be easily predicted over the course of time. Simply put, time value tends to change very little with many months to go, but as expiration nears, the rate of decline in time value accelerates and ends up at zero on the day of expiration. But time value cannot be separated from the other elements of value, so it is often seen as part of the same price feature. Time/volatility value is often described as a single version of "time value premium." If these two elements are separated, option analysis is much more logical.

The portion attributed to volatility might be accurately named "extrinsic value." This is the portion of an option's OTM premium beyond pure time value. Extrinsic value can be tracked and estimated based on a comparison between option premium trends and stock volatility.

To understand how volatility works for the underlying stock, a few technical tools are required. The trading range is easily quantified for most stocks. If you study and compare stocks, you discover that trading ranges vary considerably. The greater the breadth of the range, the more extrinsic value you find in option premium. Even so, the most popular version of price volatility is far from accurate. To accurately track and predict extrinsic value, you need to adjust the method for calculating volatility for the underlying stock.

In its most common definition, price volatility is calculated by mathematically reviewing the price range over the past 52 weeks and then assigning a percentage to the range. For example, if the stock's range has been between 27 and 34 points, volatility is 26 percent. The calculation requires dividing the net price difference by the low, as follows:

$$(34 - 27) \div 27 = 26\%$$

This seven-point price range is really quite narrow when you consider what can happen over a period of 52 weeks. Now consider how those seven points change in terms of volatility when the price range is between 85 and 92:

$$(92 - 85) \div 85 = 8\%$$

The same seven-point price spread has been reduced to an eight percent volatility level, even though the price range is the same.

Another problem with volatility is that it does not distinguish between rising and falling price trends. One stock might experience a 52-week range but currently reside at the low end. Another with an identical price range might

currently be valued at or near the top of that range. This price trend also affects the value of options at various strikes.

Finally, the price range does not allow for the occasional price spike. In statistics, one principle required to arrive at an accurate average is to exclude any unusual spikes in a field of values. This should apply to stock prices as well, but the adjustment is rarely made. For example, a review of Yahoo! (YHOO) at the end of August 2008 showed a 52-week price range from 18.58 to 34.08. The volatility was 83%, as follows:

$$(34.08 - 18.58) \div 18.58 = 83\%$$

However, this price range includes a spike up to the top of 34.08 when Yahoo! was negotiating with Microsoft, and rumors were that the Microsoft offer might be made at that highest level. Negotiations fell apart, and the price retreated. If you exclude this one-time price spike, the trading range was closer to 18.58-30.00. In this situation, volatility is reduced considerably:

$$(30.00 - 18.58) \div 18.58 = 61\%$$

Applying a basic statistical rule that spikes should be removed, the volatility for this company would be far lower than with the spike included. The definition of a spike is that it takes price above or below the trading range *and* that following the spike, prices return to the normal range without repeating the spike again.

The unreliability of the typical method for computing volatility should be discounted. To select options based on volatility, it is first necessary to develop a more comprehensive method for the basic calculation. This includes consideration of the following:

1. Price spikes, requiring adjustment of the 52-week range.
2. Changes in the breadth of the trading range over time (a changing trading range implies increases in volatility, which is likely to affect future premium value).
3. The number of points in the range compared to the stock price itself. For example, a seven-point trading range for a stock trading in the mid-20s is more significant than a seven-point trading range for a stock trading in the high 80s. Although this point spread varies in significance based on stock price, its effect on option premium is what really matters. Thus, the analysis of the point count should also track the trend from the beginning to the end of the one-year range.

Determining the level of extrinsic value (or, volatility value) requires considerable technical analysis of the stock's price *and* its trend. No current value

should ever be studied as fixed in time, but rather takes on meaning when its change is part of the analysis. The trend affects recent changes in option extrinsic value and may also point to how that trend is going to continue to change in the future.

Intrinsic Value

The final portion of the option's premium is the most easily explained and understood. *Intrinsic value* is that portion of the premium attributed to in the money (ITM) status of the option. When an option is at the money (ATM), meaning strike is equal to stock price, there is no intrinsic value. When the option is OTM, meaning call strike is higher than current stock price or put strike is lower than current stock price, there is no intrinsic value. The only time intrinsic value exists is when the option is in the money (ITM).

For example, a call has a strike of 60 and the current stock price is 62. This option has two points of intrinsic value, worth $200. Each change in the stock's price will be matched by change in intrinsic value, down to the strike and upward indefinitely.

For a put, the movement is opposite. For example, a put has a strike of 45, and the stock price is currently at 42. There are three points of intrinsic value. So if this put's premium is reported today at 4.50, that consists of 3.00 points in intrinsic value and 1.50 points in some combination of time and extrinsic value. Like the call, the put's intrinsic value moves point for point with the stock. As the stock's price declines, the put's intrinsic value rises; and as the stock's price rises, the put's intrinsic value falls.

A Range of Strategies

Within the options market, a broad range of strategies can be employed to control risk, enhance profits, or to create combinations between stock and options or between related option contracts.

The range of strategies can be distinguished as bullish, bearish, or neutral. A *bullish strategy* produces profits if the price of the underlying stock rises. A *bearish strategy* becomes profitable when the stock price falls. And a *neutral strategy* does best when the underlying stock's price remains within a narrow price range. The types of strategies can also be broken down into a few broad classifications, as follows:

1. *Single-option speculative strategies.* The speculator uses options simply as an estimation of how the underlying stock price is going to move in the future and leverages that movement. This means the option cost is far

lower than the cost of buying 100 shares; so, a portfolio of speculative options controls far more stock than trading in the stock itself. Long option positions benefit when the price of the stock rises (for long calls) or falls (for long puts). Short speculative strategies, also called uncovered or naked writes, assume higher risk positions. Although the holder of a long position will never lose more than the cost of opening the position, naked short selling includes potentially higher risks. A naked call writer has potentially unlimited risk based on the possibility that a stock's price could rise indefinitely. A naked put writer faces a downside risk; if the stock value falls, the put will be exercised at the fixed strike price, and the writer will be required to buy shares at a price above market value.

Speculative strategies serve a purpose in many circumstances and can be efficiently used for swing trading. This is an approach to the market in which trades are timed to the top or bottom of short-term price swings. Rather than using shares of stock for swing trading, using long options provides three major advantages. First, it requires less capital, so a swing trading strategy can be expanded. Second, risk is limited to the cost of the long option, which is significantly lower than buying or selling shares of stock. Third, using long puts at the top of a short-term price range is easier and less risky than shorting stock.

Single options are also used to insure other positions. For example, traders may buy one put to protect current paper profits in 100 shares of long stock. They might also buy calls to mitigate the risks of being short on stock. Insurance of other positions, or hedging those positions, has become one of the most important ways to manage portfolio risk.

2. *Covered calls.* The most conservative options strategy is the covered call. When a trader owns 100 shares of the underlying stock and sells a call, the market risk faced by the naked writer is eliminated. If the call is exercised, the writer is required to deliver those 100 shares of stock at the strike price. Although the market value at that time will be higher, the covered call writer received a premium and continues earning dividends until the position is exercised, closed, or expired. A variation of covered call writing that varies the risk level is the ratio write. This strategy involves selling more calls than full coverage allows. For example, a trader who owns 200 shares and sells three calls has entered a 3:2 ratio write.
3. *Spreads.* The *spread* involves buying or selling options at different strikes, with different expirations, or both, on the same underlying stock. Variations include calendar, butterfly, ratio, and reverse spreads. These are among the most popular of options strategies because profits and losses can be controlled and limited in the structure of the spread.

4. *Straddles.* The *straddle* involves buying or selling dissimilar options with the same strike prices and on the same underlying stock. Risks might be greater, and creating profits is often more difficult than with spreads, but many variations make straddles interesting and appealing. Because one of the two sides can be closed profitably at any time, straddle risks can be reduced over time, especially for short positions or for the strangle, a variety of straddle.
5. *Combinations.* Some strategies involve the combined positions in options with related positions in other options, often with weight favoring bullish or bearish movement in the underlying stock. Any position with both calls and puts that is not a straddle is classified as a combination.
6. *Synthetic positions.* Some strategies are designed to create profit and risk profiles equal to other positions; these are called *synthetics*. For example, opening a long call and a short put creates synthetic long stock (an options position whose price will react in the same way as buying 100 shares of stock). A long put with a short call creates the opposite: synthetic short stock. The appeal to synthetic positions is that they can be opened for less capital than the mirrored position and often with identical or lower risk.

Anyone embarking on the use of options in their portfolio needs to appreciate the various levels of risk to a particular strategy as a primary consideration. The next chapter explains how risk varies among the different options strategies.

Endnotes

1. Source: Chicago Board Options Exchange (CBOE), *2008 Market Statistics*.
2. Aristotle, *Politics*, Book One, Part XI, c. 350 B.C.
3. The original 16 companies on which call options were traded in 1973 were AT&T, Atlantic Richfield, Brunswick, Eastman Kodak, Ford, Gulf & Western, Loews, McDonald's, Merck, Northwest Airlines, Pennzoil, Polaroid, Sperry Rand, Texas Instruments, Upjohn, and Xerox.

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